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TRANSPORTATION CONCEPT SUMMARY
STATE ROUTE 52 (SR-52)
11-SD-52
P.M. 0.3 - 17.8

Existing Facility

Table S-1 shows the existing facility and operating conditions for SR-52 in San Diego County. The five-day Average Daily Traffic (ADT) is based on 2000 data.

TABLE S-1					
EXISTING FACILITY AND OPERATING CONDITIONS					
Segment/ County/ Post Mile	Location	# of Lanes/ Facility Type	ADT	Peak Hour V/C Ratio	Peak Hour Operating LOS*
1) SD 0.3-3.8	I-5 to I-805	4F	99,500	1.05	F ₀
2) SD 3.8-6.6	I-805 to SR-163	6F	117,700	0.83	D
3) SD 6.6-7.3	SR-163 to I-15	6F	84,000	0.67	C
4) SD 7.3-13.3	I-15 to Mast Blvd	4F**	69,600	1.04	F ₀
5) SD 13.3-14.8	Mast Blvd to SR-125	4F***	44,200	0.64	C
6) SD 14.8-16.4	SR-125 to Cuyamaca	U	-	-	-
7) SD 16.4-17.8	Cuyamaca to SR-67	U	-	-	-

ADT = Average Daily Traffic V/C = Volume to Capacity LOS = Level of Service
4F, 6F = (4,6) Lane Freeway U = Unconstructed

* Analysis includes auxiliary lanes where appropriate

** One additional truck-climbing lane exists in each direction on a portion of this segment.

*** Notched for additional future lanes east of the San Diego River Bridge

2020 Transportation Concept

The Concept for SR-52 is consistent with the 2000 San Diego Association of Governments' (SANDAG) Regional Transportation Plan (RTP) dated April 2000, the General Plan Transportation/Circulation Elements for the County of San Diego (Amended July 27, 1994), the City of San Diego (adopted by the City Council March 5, 1985), and the City of Santee (Revised September 1992).

Table S-2 shows the 2020 Transportation Concept and the post-2020 Ultimate Transportation Corridor for SR-52.

TABLE S-2							
2020 TRANSPORTATION CONCEPT							
Segment/ County/ Post Mile	Location	# of Lanes/ Facility Type	ADT	Peak Hour V/C Ratio	Peak Hour Operating LOS	Concept LOS*	UTC
1) SD 0.3-3.8	I-5 to I-805	6F	115,500	0.91	D	E	Study 2HOV
2) SD 3.8-6.6	I-805 to SR-163	6F+2HOV	143,800	0.73	C	E	6F+2HOV
3) SD 6.6-7.3	SR-163 to I-15	6F+2HOV	145,600	0.78	C	E	6F+2HOV
4) SD 7.3-13.3	I-15 to Mast Blvd	6F+2HOV	120,000	0.67	C	E	6F+2HOV
5) SD 13.3-14.8	Mast Blvd to SR-125	6F+2HOV	121,300	0.61	B	E	6F+2HOV
6) SD 14.8-16.4	SR-125 to Cuyamaca	6F	121,600	1.00	E	E	Study 2HOV
7) SD 16.4-17.8	Cuyamaca to SR-67	6F	107,300	0.89	D	E	Study 2HOV

ADT = Average Daily Traffic

V/C = Volume to Capacity

LOS = Level of Service

UTC = Ultimate Transportation Corridor

6F = 6 Lane Freeway

HOV = High Occupancy Vehicle lanes

NOTE: S 1) ADT's were derived from SANDAG's 2020 Cities/Counties Forecast Smart Growth Preferred Plan, Fall 2000. ADT includes projected HOV lane volumes. Peak Hour V/C Ratios and Peak Hour Operating LOS are only intended as a general planning guideline. Results may differ based on usage of other traffic analysis methodologies.

2) analysis does not include potential auxiliary lanes

* Concept LOS is based on the SANDAG Congestion Management Program (CMP) LOS standard.

2020 Transportation Concept Facility Improvements

Table S-3 shows facility improvements to SR-52 that are included in the 2020 Transportation Concept. The peak hour V/C ratio and peak hour Operating LOS listed assume completion of the proposed facility improvements.

TABLE S-3				
2020 TRANSPORTATION CONCEPT FACILITY IMPROVEMENTS				
Segment/ County/ Post Mile	Location	Improvement Description	Peak Hour Operating LOS	Concept LOS
1) SD 0.3-3.8	I-5 to I-805	Upgrade 4F to 6F	D	E
2) SD 3.8-6.6	I-805 to SR-163	Add 2HOV	C	E
3) SD 6.6-7.3	SR-163 to I-15	Add 2HOV	C	E
4) SD 7.3-13.3	I-15 to Mast Blvd	Upgrade 4F to 6F + 2HOV	C	E
5) SD 13.3-14.8	Mast Blvd to SR-125	Upgrade 4F to 6F + 2HOV	B	E
6) SD 14.8-16.4	SR-125 to Cuyamaca	Construct initial 4F, then 6F	E	E
7) SD 16.4-17.8	Cuyamaca to SR-67	Construct initial 4F, then 6F	D	E

HOV = High Occupancy Vehicle lane(s) LOS = Level of Service 4F, 6F = (4, 6) Lane Freeway

Additional improvements such as transit, non-motorized facilities, park and ride lots, transportation demand management strategies, transportation system management strategies, and additional lanes should also be developed either as part of the 2020 Transportation Concept where appropriate or the Post-2020 Ultimate Transportation Corridor.

**TRANSPORTATION CONCEPT REPORT
STATE ROUTE 52 (SR-52)
11-SD-52
P.M. 0.3 - 17.8**

INTRODUCTION AND STATEMENT OF PLANNING INTENT

This Transportation Concept Report (TCR) is a planning document, which describes Caltrans' basic approach to the development of a given corridor. Considering reasonable financial constraints and projected travel demand, this TCR establishes a 20-year transportation planning concept for State Route 52 (SR-52) and identifies modal transportation options needed to achieve the concept. The concept considers operating Levels of Service (LOS), modal improvements, and new technologies. The TCR also considers potential long-term needs for the corridor beyond the 20-year planning period.

The TCR is a preliminary planning phase document leading to subsequent programming and the project development process. As such, the specific proposed nature of improvements (i.e., number of lanes, access control, etc.) may change in later project development stages, with final determinations made during the Project Study Report, Project Report, and design phases.

Each TCR must be viewed as an entire part of a planned system. The TCR is based on the completion of the 20-year system. The system has been developed to meet anticipated travel demand generated from regional growth forecasts. Removal of any portion of a route from the system will adversely affect travel on parallel or intersecting routes. The TCR is prepared by Department staff in cooperation with local and regional agencies. The TCR will be updated as necessary as conditions change or new information is obtained.

Route Description

State Route 52 (SR-52) is a four to six mainlane east/west freeway for almost the entire route (PM SD 0.3-14.8). Segments 6 and 7, from SR-125 to SR-67 (SD PM 14.8-17.8) are the unconstructed portions of SR-52. The western terminus is at the junction of Interstate 5 (I-5) (PM SD 0.3) in San Diego. The route continues east within the City of San Diego through the communities of Clairemont, University City, Kearny Mesa, Tierrasanta, and East Elliott. The route proceeds east through Mission Trails Regional Park into the City of Santee and currently terminates at Mission Gorge Road.

SR-52 is known as both the "Soledad Freeway" and the "San Clemente Canyon Freeway". SR-52 was established as part of the California Freeway and Expressway System in 1959 (former Route 279). Segment 1 was adopted in 1962 and opened to traffic in 1970. Segments 2 and 3 were adopted in July

1972 and opened to traffic in 1988. In July 1989, the California Transportation Commission (CTC) adopted the plan for the unconstructed segments of SR-52 (Segments 4-7). Segment 4 opened for traffic in December 1993, and Segment 5 opened in November 1998. Segments 6 and 7 remain unconstructed.

Purpose of Route

SR-52 will be 17.8 miles (27.5 kilometers) in length when completed and is located in the central city area of San Diego. The primary purpose of SR-52 is to provide east/west mobility for the rapidly developing east county areas. SR-52 assists in providing some congestion relief to the already heavily traveled Interstate 8 (I-8). Sections of I-8 are presently carrying over 300,000 vehicles per day. SR-52 also serves as a major commuter route, by directly connecting east San Diego County communities with employment centers located in Kearny Mesa, Mira Mesa, La Jolla and Sorrento Valley. This purpose will be enhanced with the route's completion to SR-67. The secondary purpose of SR-52 is to provide for the efficient movement of interregional traffic.

Five freeways traverse SR-52 within District 11, San Diego County. These freeways are I-5, SR-125, I-805, SR-163, and I-15. SR-52 is a part of the "inner loop" development of freeways that can be found in the June 1996 District 11 System Management Plan (DSMP).

Existing Facility Classifications

In 1959, SR-52 was established as part of the California Freeway and Expressway System. The Federal functional classification of SR-52 is Other Principal Arterial – Freeway or Expressway. The Federal Highway Administration (FHWA) has designated the segments between I-5 and I-805 as part of the national network for Surface Transportation Assistance Act (STAA) for trucks and segments from I-805 to SR-125 as terminal access routes to the national network. Also along SR-52 are the kingpin to rear axle tractor/semi-trailers advisory signs from I-15 to Mission Gorge Road which is classified as California Legal (CL).

In 1968 the entire route was added to the California State Scenic Highway System and is eligible to be designated as an official State Scenic Highway upon completion of the route to SR-67.

SR-52 is not a part of the following systems: National Highway System (NHS), LifeLine Routes for Earthquake Emergency Response, Intermodal Corridors of Economic Significance (ICES), Interregional Road System (IRRS), Blue Star Memorial Highways, High Emphasis Interregional Routes, International Border Trade Corridors, or the Strategic Highway Corridor Network.

For maintenance programming purposes, the State Highway System has been divided into Class 1, 2, and 3 highways based on the Maintenance Service Level (MSL) descriptive definitions. The constructed and unconstructed segments of SR-52 are classified as MSL 2.

- MSL-2 contains segments classified as an Other Freeway/ Expressway or Other Principal Arterial not in MSL 1, and route segments functionally classified as minor arterial not in MSL 3.

Route Segments

SR-52 is examined in seven segments for traffic analysis and other purposes. Table 1 lists the segments and includes some of the information used as criteria for segment divisions.

TABLE 1				
ROUTE SEGMENTATION				
Segment	County/ Post Mile	Location	# of Lanes/ Facility Type	Urban/ Rural
1	SD 0.3-3.8	I-5 to I-805	4F	U
2	SD 3.8-6.6	I-805 to SR-163	6F	U
3	SD 6.6-7.3	SR-163 to I-15	6F	U
4	SD 7.3-13.3	I-15 to Mast Blvd	4F*	U
5	SD 13.3-14.8	Mast Blvd to SR-125	4F**	U
6	SD 14.8-16.4	SR-125 to Cuyamaca	Unconstructed	-
7	SD 16.4-17.8	Cuyamaca to SR-67	Unconstructed	-

* One additional truck-climbing lane exists in each direction for this segment.

** Notched for future lanes east of San Diego River Bridge

4F, 6F = (4,6) Lane Freeway U = Urban

Existing Facility

Segment 1 is a four lane divided freeway with interchanges at I-5 (PM SD 0.3) and I-805 (PM SD 3.8). This segment forms the northerly boundary of Marian Bear Memorial Natural Park. Segment 2 is a fourlane freeway with an interchange at Convoy Street (PM SD 5.5). Segment 3 is a six lane freeway plus connectors with interchanges at SR-163 (PM SD 6.6), Kearny Villa Road (PM SD 6.9) and I-15 (PM SD 7.3). Segment 4 is a four lane freeway with an additional truck climbing lane in portions of the segment and interchanges at Santo Road (SD PM 8.7) and Mast Boulevard (PM SD 13.3). Segment 5 is a four lane freeway with an interchange at SR-125 (PM SD 14.8). Segments 6 and 7 are unconstructed.

A physical description of the existing facility geometrics in a segment-specific format is shown in Table 2.

TABLE 2

EXISTING FACILITY GEOMETRICS						
Segment/ Post Mile	# Lanes & Facility Width	Outside Shoulder Width	Inside Shoulder Width	Maximum R/W Width	Median Width	Grade Line
1) 0.3-3.8	4F @ 3.7 (12)	1.2-3.0 (4-10)	0.6-1.5 (2-5)	70.1-100.6 (230-330)	10.4-30.2 (34-99)	F
2) 3.8-6.6	6F @ 3.7 (12)	3.0 (10)	1.5-3.0 (5-10)	106.7 (350)	14.0-21.3 (46-70)	F & R
3) 6.6-7.3	6F @ 3.7 (12)	3.0 (10)	1.5-3.0 (5-10)	106.7 (350)	14.0-21.3 (46-70)	F
4) 7.3-13.3	4F @ 3.7 (12)	3.0 (10)	1.5-3.0 (5-10)	106.7-152.4 (350-500)	21.3-23.8 (70-78)	F & R
5) 13.3-14.8	4F @ 3.6 (11.8)	3.0 (10)	1.5 (5)	126-166.2 (413.4-545.3)	18.6 (61)	F
6) 14.8-16.4	unconstructed					
7) 16.4-17.8	unconstructed					

Note: Widths are in meters (feet in parantheses)
 4F, 6F = (4,6) Lane Facility R/W = Right of Way

Grade Line Designations:

F = Flat R = Rolling

The approximate location, direction and number of existing auxiliary lanes and connectors on SR-52 are shown in Table 3. Auxiliary lanes can enhance traffic flow on the freeways by providing supplemental localized capacity for motorists entering and exiting at freeway ramps.

TABLE 3			
EXISTING AUXILIARY LANES			
Location	Direction	Number	Connectors
I-5 to Regents Rd	Westbound	1	
I-5 to Regents Rd	Eastbound	1	
Genesee Ave to I-805*	Eastbound	1	
I-805 to Convoy St**	Westbound	1	
I-805 to Convoy St	Eastbound	1	
Convoy St to SR-163	Westbound	1	
Convoy St to SR-163	Eastbound	2	
SR-163 to Kearny Villa Rd	Westbound	1	2
SR-163 to Kearny Villa Rd	Eastbound	2	2
Kearny Villa Rd to I-15	Westbound	1	1
Kearny Villa Rd to I-15	Eastbound		2
I-15 to Santo Rd	Westbound	1	
Santo Rd to Mast Blvd***	Westbound	1	
Santo Rd to Mast Blvd***	Eastbound	1	

* Auxiliary lane begins from the left at SD PM 3.02 and the right lane drops at I-805.

** Auxiliary lane begins near SD PM 4.39 and two lanes are dropped at I-805.

*** Truck climbing lanes

Currently there are count stations set up for future ramp meters along the SR-52 corridor at the following locations:

- Santo Road to Eastbound SR-52 (P.M. 8.50)
- Santo Road to Westbound SR-52 (P.M. 8.50)
- Mast Boulevard at Westbound SR-52 (P.M. 13.36)
- Mast Boulevard at Eastbound SR-52 (PM 13.36)

There are several arterial streets that parallel or intersect SR-52 that could provide alternative routes for commuters wishing to avoid peak hour congestion on the State highway. Listed in Table 4 are the major arterials along the corridor that parallel or intersect SR-52.

TABLE 4		
SELECTED ARTERIAL STREETS		
Segment	Arterial	Boundaries
1	Regents Rd/Clairemont Mesa Blvd	Genesee Ave to Santo Rd
1	Genesee Ave	Torrey Pines Rd to SR-163
1	Ardath Rd	Torrey Pines Rd to SR-52
1	Governor Dr	Regents Rd to I-805
1/2	Nobel Dr	La Jolla Village Dr to Miramar Rd
1-4	Balboa Ave (SR-274)/Tierrasanta Blvd	I-5 to Santo Rd
1-4	La Jolla Village Dr/Miramar Rd	Torrey Pines Rd to I-15
2	Convoy St	SR-52 to Aero Dr
3	Kearny Villa Rd/Ruffin Rd	Carroll Canyon Rd to Aero Dr
3/4	Aero Dr	Convoy St to Santo Rd
4	Santo Rd	SR-52 to Aero Dr
4-7	Mast Blvd	SR-52 to Magnolia Ave
5/6	Mission Gorge Rd	I-8 to SR-67
5-7	Prospect Ave	Mesa Rd to SR-67
6	Fanita Dr	Mission Gorge Rd to Navajo Dr
6/7	Cuyamaca St	Mast Blvd to Fletcher Pkwy
7	Magnolia Ave	Mast Blvd to Fletcher Pkwy

Park and Ride facilities encourage and support the use of commuter or express transit and car/vanpooling for a portion of longer vehicle trips and consequently reduce vehicle miles of travel (VMT) within the San Diego region. There are several Park and Ride lots near or adjacent to SR-52. They are at the following locations:

- Interstate 5 at Gilman Drive
- Interstate 805 at Governor Drive
- K-Mart on Mission Gorge Rd. @ Rancho Fanita Dr. and West Hills Parkway
- Mission Gorge Road @ Big Rock Road
- Magnolia Avenue @ Alexander Way (the Sunrise Church)

Express bus service parallel to the SR-52 corridor consists of the El Cajon-Santee-Kearny Mesa express route 870. This route operates Monday through Friday for two trips in the morning to Kearny Mesa and two trips in the evening to El Cajon/Santee every 30 minutes.

One other express bus service partially utilizes the SR-52 corridor. Route 210 from Mira Mesa-Downtown San Diego operates every 15 to 30 minutes, Monday through Friday, during peak rush hours only.

General public Dial-A-Ride services near the SR-52 corridor are located in the southern portion in the City of Santee. The El Cajon County Transit System (CTS) Dial-A-Ride services covers sections of La Mesa and Santee, along with El Cajon. This curb-to-curb service is for residents of El Cajon and is an on-

demand type of service. The Dial-A-Ride is a combination of a bus and taxi, but is offered at a much lower rate than a taxi.

To compliment San Diego's Dial-A-Ride services, the Americans with Disabilities Act (ADA) provides paratransit that offers lift equipped, curb-to-curb service for persons whose disabilities prevent them from getting to or using regular bus or trolley services. SR-52 offers paratransit in Zone I & III by the San Diego Transit Corporation (SDTC) - Wheels (Regional Transportation Plan, April 2000). This service is run and administered by the Metropolitan Transit Development Board (MTDB).

SR-52 from Santo Road to Mast Road includes shoulders that are open to bicycle traffic with supporting signage and striping. Consideration may be given in the future to the development of a separate Class I bicycle path in this segment. Secure bicycling storage facilities are provided for commuters at bus, trolley and Coaster stations, at park-and-ride lots, and at other locations open to the public. Along the SR-52 route there are two existing facilities, the first at the Santee trolley station in Santee and the second at I-805/Governor Drive Park-and-Ride #20.

SOCIO-ECONOMICS

This section discusses a corridor growth and demographic analysis for existing and future conditions in the SR-52 corridor.

Corridor Growth and Demographics

Table 5 shows current population, a 2020 projected population estimate, and the resultant growth rate for the two jurisdictions through which SR-52 travels.

TABLE 5			
JURISDICTIONAL POPULATION GROWTH			
Jurisdiction	1995	2020	Percent Change
San Diego	1,174,422	1,693,533	44%
Santee	53,593	74,856	40%

Source: SANDAG 2020 Cities/County Forecast Profiles (February 1999)

Table 6 shows demographic characteristics for appropriate subregional areas.

TABLE 6							
POPULATION, HOUSING AND EMPLOYMENT GROWTH, SELECTED SAN DIEGO COUNTY JURISDICTIONS							
Location	Year	Total	% Change	Total	% Change	Total	% Change

		Population	from Base Year	Housing Units	from Base Year	Employment	from Base Year
Coastal	1995	76,883	N/A	40,708	N/A	37,785	N/A
	2005	84,336	9.7	41,924	3.0	39,923	5.7
	2010	84,055	9.3	42,224	3.7	40,296	6.6
	2020	83,323	8.4	41,718	2.5	42,355	12.1
University	1995	48,578	N/A	22,493	N/A	57,247	N/A
	2005	55,673	14.6	24,632	9.5	71,653	25.2
	2010	59,768	23.0	26,908	19.6	73,513	28.4
	2020	65,045	33.9	29,641	31.8	78,156	36.5
Kearny Mesa	1995	140,498	N/A	56,077	N/A	133,103	N/A
	2005	156,444	11.3	60,404	7.7	152,279	14.4
	2010	162,993	16.0	64,217	14.5	154,994	16.4
	2020	176,119	25.4	71,213	27.0	165,446	24.3
Miramar	1995	4,579	N/A	637	N/A	6,272	N/A
	2005	4,353	-5.0	639	0.3	5,685	-9.4
	2010	4,328	-5.5	641	0.6	5,685	-9.4
	2020	4,310	-5.9	646	1.4	5,704	-9.1
Elliot- Navajo	1995	90,455	N/A	35,332	N/A	21,316	N/A
	2005	96,877	7.1	36,181	2.4	25,457	19.4
	2010	97,059	7.3	36,664	3.8	25,669	20.4
	2020	99,232	9.7	37,533	6.2	26,084	22.4
Santee	1995	52,313	N/A	17,944	N/A	14,537	N/A
	2005	64,841	23.9	21,364	19.1	19,557	34.5
	2010	69,752	33.3	23,106	28.8	20,785	43.0
	2020	70,242	34.3	23,296	29.8	22,836	57.1
San Diego Region	1995	2,669,200	N/A	996,684	N/A	1,186,837	N/A
	2005	3,223,474	20.8	1,153,736	15.8	1,513,234	27.5
	2010	3,437,697	28.8	1,245,057	24.9	1,565,824	31.9
	2020	3,853,297	44.4	1,404,231	40.9	1,721,651	45.1

Source: SANDAG 2020 Cities/County Forecast Profiles; Subregional Areas 10, 11, 12, 16, 17, 35 (February 1999)

A method to ensure compatibility between land use and the statewide transportation system is the Department's Intergovernmental Review process. Potential development projects are reviewed to determine what impacts they may have on State transportation facilities. Impacts can include level of service changes, right of way protection issues, operations and/or maintenance issues, or growth inducing/cumulative impacts. Intergovernmental Review also analyzes proposed developments to ensure consistency with regional and state transportation planning documents.

Potential major development projects within the SR-52 corridor that will significantly increase congestion on area surface streets, freeways, and freeway interchanges are shown in Table 7. Although not listed in the table, there may be an additional number of smaller development projects that may have a cumulative impact on traffic in the corridor. The table includes projects for which an Environmental Impact Report, a Specific Plan or a Master Plan has been or will be prepared. Because of uncertainties associated with the existing and future socioeconomic and political climates, the scale of development may be subject to change, and it is possible that some of the listed projects may not be developed.

TABLE 7

TRIP INDUCING DEVELOPMENT PROJECTS					
Segment	Project Name	Dwelling Units	Commercial Square Footage	Project Acreage	Trips Generated Daily
4/5	Through Truck Traffic (Signalized Arterial)	0	0 (0)	0 (0)	25,000
2	West Miramar Landfill	0	0 (0)	807 (326.6)	2,500
2	SR-52/Convoy St Shell Station				
6/7	Santee Trolley Square (Commercial Center)	0	368,980 (34,278.2)	50 (20.2)	18,670
4/5	East Mission Gorge Trunk (Sewer Rehabilitation)	0	0 (0)		0
6	Forester Creek Improvement (Build to 100 year flood)	0	0 (0)	N/A	0
4/5	Sycamore Landfill (Increased Trips)	0	0 (0)	493 (199.5)	296
7	Building		750 (69.7)		
	TOTALS:	0	369,730 (34,347.9)	1350.0 (456.3)	46,466

Source: Caltrans District 11 Intergovernmental Review Branch

Notes: Some trip inducing projects are residential , commercial , a mixture of both, or involve traffic pattern modifications

Square footage is denoted as (square meters-m²) within the parentheses

Acreage is denoted as (hectares) within the parentheses

Regional Growth Management Strategy/Region 2020

The region-wide growth forecast, provided by SANDAG, indicates another one million people will be added to the county by 2020. This population could easily translate to more than 500,000 additional vehicles and over 400,000 new jobs. This additional population will further strain the housing stock, transportation system, public services, environment and economy. Recent developments in the evolving REGION2020 arena include the development of a definition of smart growth in the San Diego region. The June 2000 working draft on "REGION2020: Smart Growth Definition, Principles, and Designations" states that, "Smart growth, is a compact, efficient, and environmentally sensitive pattern of development that provides people with additional travel, housing, and employment choices by focusing future growth away from rural areas and closer to existing and planning job centers and public facilities".

SANDAG is working with the staffs and elected officials of the local jurisdictions to address issues related to smart growth implementation. The first step is for local governments to to make specific commitments to support REGION2020 and implement SMART GROWTH principles.

TRANSPORTATION CONCEPT

The 2020 Transportation Concept includes State highway, transit service, system management and travel reduction, goods movement, international border, aviation and nonmotorized components. The State highway and transit components are listed in Table 8, while the other components are discussed in the Concept Rationale section. These components are examined in segments for traffic analysis and other purposes. The 2020 traffic projections for SR-52 are based on Caltrans traffic projections and SANDAG's 2020 Cities/Counties regional "smart growth" preferred plan forecasts and assume completion of the future regional transportation system. The 2020 traffic projections are subject to change based on periodic traffic forecasting model adjustments and ongoing supplemental transportation studies.

The 2020 Transportation Concept LOS is based on the SANDAG Congestion Management Program (CMP). The CMP minimum standard of LOS 'E' is the 2020 Transportation Concept LOS for all segments of SR-52.

The concept for SR-52 is consistent with the 2000 SANDAG RTP, the General Plan Transportation/Circulation Elements from the County of San Diego (Amended July 27, 1994), the City of San Diego (adopted by the City Council March 5, 1985), and the City of Santee (Revised September 1992).

Table 8 shows the 2020 Transportation Concept for SR-52.

TABLE 8							
2020 TRANSPORTATION CONCEPT							
Segment/ County/ Post Mile	Location	# of Lanes/ Facility Type	ADT	Peak Hour V/C Ratio	Peak Hour Operating LOS	Concept LOS*	UTC
1) SD 0.3-3.8	I-5 to I-805	6F	115,500	0.91	D	E	Study 2HOV
2) SD 3.8-6.6	I-805 to SR-163	6F+2HOV	143,800	0.73	C	E	6F+2HOV
3) SD 6.6-7.3	SR-163 to I-15	6F+2HOV	145,600	0.78	C	E	6F+2HOV
4) SD 7.3-13.3	I-15 to Mast Blvd	6F+2HOV	120,000	0.67	C	E	6F+2HOV
5) SD 13.3-14.8	Mast Blvd to SR-125	6F+2HOV	121,300	0.61	B	E	6F+2HOV
6) SD 14.8-16.4	SR-125 to Cuyamaca	6F	121,600	1.00	E	E	Study 2HOV
7) SD 16.4-17.8	Cuyamaca to SR-67	6F	107,300	0.89	D	E	Study 2HOV

HOV = High Occupancy Vehicle lane
UTC = Ultimate Transportation Corridor

V/C = Volume to Capacity
ADT = Average Daily Traffic

LOS = Level of Service
6F = 6 Lane Freeway

NOTE: 1) ADT's were derived from SANDAG's 2020 Cities/Counties Forecast Smart Growth Preferred Plan, Fall 2000. ADT includes projected HOV lane volumes. Peak hour V/C Ratios and Peak Hour are only intended as a general planning guideline. Results may differ based on usage of other traffic analysis methodologies.

2) Analysis does not include potential auxiliary lanes

*Concept LOS is based on the SANDAG CMP minimum LOS standard.

CONCEPT RATIONALE

An intermodal approach is necessary in order to provide for the projected increased person-trips in the SR-52 corridor. The concept rationale for SR-52 is based on the route's primary purpose, which is to provide additional east-west mobility for San Diego and east county communities.

Highway Component

The 2020 Transportation Concept for State Route 52 includes the upgrading of Segment 1 (SD PM 0.3-3.8) from a four lane freeway to a six lane freeway. Segment 2 (SD PM 3.8-6.6) will enhance the already existing six lane freeway by adding two high occupancy vehicle (HOV) lanes. Segment 3 (SD PM 6.6) through Segment 5 (SD PM 14.8) will improve to a six lane freeway plus two HOV lanes. The last two segments remain unconstructed. Segment 6 (SD PM 14.8-16.4) will begin construction roughly in 2004 and Segment 7 (SD PM 16.4-17.8) in 2007. Initially these two segments will be constructed as a four-lane freeway, later expanding to six-lanes, providing an intraregional link to east county cities.

There are three new interchanges proposed and they are located at SR-52/ SR-125, Fanita Drive (half-diamond, eastbound on, westbound off) Cuyamaca Street, and the SR-52/SR-67.

Operational enhancements have been utilized to help ease congestion by improving traffic flow. Future auxiliary lanes can be found in Table 9 below.

TABLE 9		
FUTURE AUXILIARY LANES		
Location	Direction	Number
Santo Road to Mast Boulevard	Eastbound	1 (1000 meters)
Santo Road to Mast Boulevard	Westbound	1 (480 meters)
Interstate 15 to Santo Road	Westbound	1 (480 meters)
SR-125 to Cuyamaca	Eastbound	1
SR-125 to Cuyamaca	Westbound	1
Magnolia Avenue	EB Off/WB On	

In an effort to improve transportation in the San Diego region over ten years ago, citizens and lawmakers pushed for a 1/2-cent sales tax increase. Proposition A, approved by San Diego County voters in 1987, created the San Diego Transportation Improvement Program, more commonly known as "TransNet." This program was designed to provide for 20 years of transportation improvements equally spread among highways, mass transit, and local streets and roads. As a result of the TransNet funds, the extension of SR-52 to SR-67 will be complete.

The 2000 SHOPP program was designed to preserve and protect the State highway system under four types of categories, including 1) traffic safety, 2) roadway rehabilitation, 3) roadside rehabilitation, and 4) operations. SR-52 SHOPP projects include:

- Traffic Safety
 - ✓ Install median barrier from I-805 to SR-163
 - ✓ Construct median barrier west of Kearny Villa Road to Santo Road
- Roadway Rehabilitation
 - ✓ Rehabilitate roadway from I-5/SR-52 separation to I-805/SR-52 separation
- Roadside Rehabilitation
 - ✓ Highway planting restoration east of I-5 to west of I-805
- Operations

Transit Component

The only rail transit that exists in the vicinity of SR-52 is the East line trolley in Santee. The extension of the San Diego Trolley Orange Line traverses the City of El Cajon and terminates in the City of Santee at the Santee Town Center. SR-52 is not currently under study as a future light rail transit (LRT) corridor; however, it is designated in the April 2000 Regional Transportation Plan (RTP) as a proposed regional bus route.

In addition, MTDB undertook a two-year strategic planning process, called Transit Works, that culminated in the adoption of a *Transit First* strategy in October 2000. MTDB, NCTD, and SANDAG subsequently worked together to develop a strategy in which Transit First and Fast Forward would serve as the foundation for shaping the SANDAG Regional Transit Vision (RTV).

Based on the current RTV, a variety of transit service concepts are proposed for the San Diego region, including Yellow Car, Red Car, Blue Car and Green Car service. All of these services would have connectivity with each other.

Transit service on SR-52 is expected to include Yellow Car Service (Regional Express Services), which will primarily connect residential areas with major employment and activity centers. These routes will mostly travel on the freeway system, using HOV or Managed Lanes and bypass facilities where required to avoid areas of high traffic congestion.

Yellow Car Services can be operated with buses or flextrolleys (“flextrolley” or “trains on tires”) operated like buses with the look and feel of rail vehicles.

The Metropolitan Transit Development Board (MTDB) also develops the *Short Range Transit Plan (SRTP)* which includes schedule adjustments to improve performance to the existing routes 870 & 210. Route 210 has been scheduled for afternoon adjustments. The SRTP is still considering the *East County Transit Needs Assessment Study* for later implementation.

System Management and Travel Reduction Component

An important system management factor is the development of the *Traffic Operation Plan (TOPS)* for Southern California. The goal for TOPS is to address all modes, local streets and arterials, and address the demand side of transportation inclusively. An investment into TOPS would, in essence, complement the current system in place.

There are many improvements for SR-52 listed in the *Traffic Operations Strategies – Five-Year Plan List of Projects (July 2000)*. This list designates SR-52 for installation of fiber optics, closed-circuit television (CCTV), and a traffic monitoring station (TMS) in two different segments from I-5 to Santo Road and from Santo Road to SR-125. TOPS also includes plans for 12 future ramp meter activations and HOV lanes between I-805 to SR-125. Table 10 shows the TOPS projects that the Department is considering for SR-52.

Table 10			
Representative TOPS Investments			
Level 1		Level 2	Level 3
Intelligent Infrastructure	Physical Operational Improvements	HOV Network Gaps	Freeway Interchange Modifications
Changeable Message Signs	Alignment Upgrades	HOV Connectors	Freeway Connectors
Closed-Circuit Televisions	Auxiliary Lanes	HOV Drop Ramps	Freeway Connector Metering
Fiber Optics	Intersection Upgrades	HOV/ Managed Lanes	
Highway Advisory Radios	Lane/Shoulder Widening	Other	
Metering and Metering Control	Passing Lanes		
Roadway Weather Information System	Ramp Modifications		
Transportation Management Center Upgrades	Other		
Traffic Monitoring Stations			
Communication Links			
Signal Upgrades			

The *SANDAG Traffic Signal Optimization Program (April 1994)* program was developed to enhance inter-jurisdictional coordination, to provide detailed guidelines for the implementation of a countywide traffic management system, and to identify a conceptual plan for future implementation of Intelligent Vehicle Highway System (IVHS) technologies. The proposed signal system improvements are expected to significantly reduce vehicle emissions and traffic congestion.

In addition to the aforementioned, the goal of TCM's for the Air Quality Plan report developed by the *SANDAG Regional Transportation Plan (RTP) dated April 2000* is to reduce traffic congestion and motor vehicle emissions in the San Diego air basin in order to meet the requirements of the state's Congestion Management Act, the California Clean Air Act of 1988, and the federal Clean Air Act Amendment of 1990. The first component includes alternative transportation mode capacity expansion such as transit expansion, HOV lanes, vanpool programs, park and ride facilities, and bicycling facilities. The second component addresses Transportation System Management (TSM), and includes traffic flow improvements at the Transportation Management Center (TMC) such as call boxes, changeable message signs (CMS), closed-circuit television (CCTV), highway advisory radio (HAR), ramp meters, real-time incident detection, CHP dispatch, and cellular 911 operators. The last component is indirect source control facilities in the Air Quality/Land Use Guidelines produced by the Air Pollution Control District (APCD). Additional TCM components include staggered

work hours, parking management, developer and employer-based incentives, and implementation of ordinances.

The *Project Study Report PM 7.3/13.2 (Caltrans District-11; Advance Planning Branch, September 1999)* for SR-52 lists some fiber optic installments and TMC type elements. These future projects include traffic monitoring stations (loop detectors), CCTV sites, fiber optic communication infrastructure between I-15 and Mast Boulevard, and one changeable message sign (CMS) which would be placed on westbound SR-52 prior to the I-15 junction. A CMS already exists on westbound SR-52 just east of Santo Road.

Another study that is being undertaken is the *67/125 Corridor Study* by SANDAG. This study is initially focusing on improvements to SR-67. A future SANDAG study is expected to investigate the development of a new north-south highway alignment east or west of I-15 and north of SR-52.

One of the many components of this improved utilization is the expansion of the existing and proposed arterial street network within the corridor. These arterial improvements are expected to substantially increase mobility and reduce peak period demands on the freeway. These enhancements can provide routes for short intraregional trips where existing arterials are inadequate or act as alternative routes for some regional trips. Capacity of existing arterials within the corridor are affected by roadway conditions, access conflicts, numerous traffic signals, and general traffic congestion. Realignment, widening, correcting roadway conditions, minimizing side friction, and improving the traffic flow of arterials can increase corridor capacity.

"SANDAG's Cities/County Transportation Advisory Committee (CTAC) has been coordinating the development of the *Regional Arterial System (RAS) Project Priority List*, which includes unfunded/underfunded candidate projects that could compete for future discretionary transportation funding allocations" (SANDAG RTP, April 2000). Among the arterials funded in the 1998-2004 *Regional Transportation Improvement Plan (RTIP)* is Mission Gorge Road in Santee, which is funded through federal *Surface Transportation Program (STP)* funds. Another funded regional arterial project is the Forester Creek Channel. This improvement will help protect Santee from a 100-year flood, and improve north/south traffic flows over Forester Creek between Prospect Avenue and Mission Gorge Road.

The *Regional Transportation Plan (April 2000)* denotes two future regional arterials that need to be constructed and/or improved, which are the eastward completion of Nobel Drive and the railroad crossing at Regents Road.

The City of Santee has proposed widening Prospect Avenue from Cuyamaca Street to Magnolia Avenue to increase the arterial capacity.

Additional TSM improvements are expected to optimize traffic flow on the existing transportation systems within the corridor. Specifically, ramp meters will be installed in a variety of locations. The *TSM Project Priority List* developed by the TOPS program provides some guidance regarding future locations for ramp meters. Ramp metering is a traffic management tool to regulate the flow of traffic entering freeways during peak traffic hours. A list of future ramp meters for SR-52 can be found in Table 11.

TABLE 11	
FUTURE RAMP METER ACTIVATIONS	
Westbound	Eastbound
Regents Road	Regents Road
Genesee Avenue	Genesee Avenue
Convoy Street	Convoy Street
I-805 connector	I-805 southbound connector
SR-163 southbound connector	I-805 connector
Kearny Villa Road	SR-163 connector
Santo Road	SR-163 northbound connector
Mission Gorge Road	Kearny Villa Road
Cuyamaca Street northbound	Santo Road
Cuyamaca Street southbound	Mission Gorge Road
Magnolia Avenue	Fanita Road
	Cuyamaca Street

Freeway congestion is most often caused by a bottleneck, where the freeway demand exceeds the freeway capacity. When the demand exceeds the capacity, congestion creates stop-and-go traffic. Ramp metering increases the capacity of mixed flow lanes and enables traffic to flow at greater speeds. The number of traffic accidents is reduced as well. On weekdays, the meters operate during the peak traffic periods. The ramp volume as well as the volume on the freeway determines the rate at which cars are allowed onto the freeway. The mainline responsive controllers react to the volumes on the freeway. If the volumes decrease significantly, then the meter will adjust and allow more cars onto the freeway. If the freeway volume is very light, the meters may go to continuous green.

Park and Ride facilities will be provided in appropriate locations within the SR-52 corridor. The consultant prepared *San Diego Regional Park and Ride Study (July 1994)* analyzed and evaluated several planned and potential Park and Ride lot locations throughout the region. Future planned and potential sites for SR-52 include:

- SR-52 & Santo Road (Shopping Center)

Demand management strategies that have the potential to reduce congestion include ridesharing, home or satellite workplace telecommuting, variable work hours, employee transportation allowances, and low-cost parking for carpools and vanpools.

Transportation Control Measures (TCM), Transportation System Management (TSM) and Transportation Demand Management (TDM) improvements tend to overlap and work synergistically. The total effect of these improvements has the potential to improve air quality and alleviate traffic congestion.

The Freeway Service Patrol (FSP) program was designed to alleviate incident related traffic congestion by operating a tow service to aid stranded or disabled vehicles on urban freeways during the morning and afternoon commuter periods. The FSP commonly performs tasks such as changing a flat tire, jump-starting vehicles, providing gas, or towing disabled vehicles. Obstacles along the roadside can often cause a freeway operating at capacity to breakdown into stop and go traffic. In September 1992, the Freeway Service Patrol Act was enacted under Assembly Bill 3346 and is funded through 2002. Currently, the FSP serves SR-52 from I-5 to Santo Road.

As a complement to the FSP most urban freeways and expressways that are a part of the State Highway System in San Diego County have a system of "call boxes". The system of call boxes is coordinated between the California Highway Patrol (CHP) and the Department. Calls are answered by the CHP dispatch operator and appropriate services are notified to provide assistance. Most call boxes are located on the right shoulder of the highway, with some located on transition, exit, and entrance ramps. Blue signs designate each solar powered call box, which are marked with the route number and postmile information.

Goods Movement Component

The passage of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991 created additional emphasis being placed on the movement of goods in an integrated transportation network. It is essential to identify critical elements within major goods movement corridors in order to develop effective strategies for managing, maintaining and improving transportation system connectivity. Goods movement planning incorporates analysis of impacts on noise, air quality, land use, congestion, safety, and can have a significant economic impact on our regional economy. The Transportation Equity Act for the 21st Century (TEA-21) builds on the initiatives established in ISTEA, authorizing highway, highway safety, transit and other surface transportation programs for the years 1998-2003.

Aviation Component

Although the Aviation Component is not as critical to the 2020 Transportation Concept as the other modal options, ground access issues to and from airport facilities could have an impact on the State Highway System. In the SR-52 corridor there are three airports and heliports of importance; they are the Marine Corps Air Station (MCAS) Miramar, Montgomery Field Airport, and Gillespie Field. One other heliport not described below is in Kearny Mesa and is for private usage only.

MCAS Miramar is a major military airport and heliport serving the Marine Corps in the San Diego region. In 1993, Congress approved a base closure and realignment plan, which replaced the naval operations at Miramar with Marine Corps fixed wing and helicopter air operations. Formerly known as Naval Air Station (NAS) Miramar, MCAS Miramar is home to ten rotary-winged squadrons and 11 fixed-winged squadrons. A majority of the operations will take place on the base. Previously, the Navy tended to have flight patterns directly over residential areas. A newer flight pattern has been developed to reduce the noise impact upon the local residents.

Montgomery Field is a general aviation airport with heliport capabilities and is centrally located in Kearny Mesa. The airport is home base to approximately 600 aircraft and offers a 4,600' lighted runway served by an Instrument Landing System (ILS), a 3,400' parallel runway, a 3,400' crosswind runway, a control tower operating from 6:00am-9:00pm, and a full range of aviation support facilities.

Gillespie Field is a general aviation airport with heliport capabilities. Gillespie is also the oldest and largest of the eight general aviation airports within San Diego County. In addition to the airport itself, Gillespie Field includes two business parks, which provide more than 2,000 jobs in the City of El Cajon and a \$40 million boost to the local economy. The airport is home to flight schools, repair and maintenance facilities, aircraft storage, food and beverage services, fuel, instrument and avionics shops, rental cars, aircraft sales and aircraft rental services.

Nonmotorized Component

The Nonmotorized Component includes continued utilization of the existing Regional Bikeway System, the Bus Bicycle Rack Program and the Bicycle Locker program at Park and Ride lots. SR-52 has been constructed with shoulders that are open to bike traffic with supporting signs and striping. Efforts will be made to replace this facility with a Class I bike path." (2020 RTP; April 2000) A majority of bicycle travel within other portions of the SR-52 corridor exists on parallel arterials and frontage roads.

A future bicycle path being considered is the San Clemente Canyon bike path that would include signs and striping within the SR-52 facility. The stretch being studied is from I-5 to Convoy Street (*District 11 1995 Transportation System Development Plan*).

SANDAG is currently developing design guidelines to address pedestrian issues related to transportation.

Tourism Component

The California Department of Tourism estimates that recreational activities and the travel industry generate \$55.2 billion dollars per year and sustain 700,000 jobs statewide, which makes California first in the nation for visitors and earnings. California drew over 250 million person trips in 1998, of which San Diego received over 30 million person trips. Some of the most attractive places to see in San Diego are Sea World, Old Town, and Balboa Park. The Gaslamp Quarter National Historic District in downtown San Diego also has its fair share of visitors along with the Del Mar Fairgrounds.

Along the SR-52 corridor there are additional recreational activities that have attracted visitors such as ocean and beach activities, state parks, open space canyon reserves, and golf courses. A few of these tourist locations include the University Towne Center (UTC) shopping center in University City, Soledad Natural Park, Rose Canyon Open Space Park, Marian Bear Memorial Natural Park, Mission Trails Regional Park, Carlton Oaks Country Club, and the Admiral Baker Golf Course. All locations have heavily congested traffic depending on the season.

AIR QUALITY

SR-52 is located in the San Diego Air Basin. Progress has been made in the San Diego Air Basin in attaining federal and state air quality standards. Federal and state standards have been met for lead, nitrogen dioxide, sulfur dioxide, and carbon monoxide (CO). The approximate western two-thirds of Air Basin is federally designated as a maintenance area for CO. Federal standards are being met for inhalable particulates labeled as PM10. State standards for PM10 have not been met and the possible addition of a PM2.5 standard may change the Air Basin's federal status as it relates to inhalable particulates.

Currently, the San Diego Air Basin is classified as a "serious" ozone non-attainment area under both the state and federal Clean Air Acts. The non-attainment classification, based on the amount of pollutant above the one hour standard, determines the minimum state and federal control requirements and the federal attainment deadline for the San Diego Region. The current federal one-hour standard for ozone may soon be altered to an eight hour standard. If this occurs there should be no change in the Air Basin's ozone classification.

INTELLIGENT TRANSPORTATION SYSTEM (ITS)

New methodologies can assist in providing better management of future transportation systems. Advanced technology research is one tool that can be used to enhance management of the transportation system. Under ISTEA, the Intelligent Vehicle Highway System (IVHS) Program identified four transportation corridors in the nation to showcase coordinated intelligent transportation system elements. Congress established the ITS Corridors Program to: (1) provide multiyear funding for showcasing ITS applications and benefits, (2) establish national ITS test beds, (3) advance ITS strategic planning, (4) leverage federal aid and other funding sources, (5) expose the public to ITS potentials, and (6) evaluate ITS technologies.

ITS activities in the San Diego region includes innovative use of the existing solar powered freeway call box infrastructure, the development of a multifunctional/multimodal TMC in Kearny Mesa, the provision of automated traffic operation information to fleet operators in the goods movement, transit, and hazardous material industries, and the development of an IVHS International Border Crossing Operations Strategic Plan. Additional IVHS technologies that could be utilized in the San Diego region include vehicle navigation systems, computerized roadway sensors, changeable message signs, television roadway monitoring devices, smart car sharing systems, and advanced highway maintenance and construction technology.

Another related new technology is the future provision of an Automated Highway Vehicle System (AHVS). ISTEA mandated development of an automated highway and a vehicle prototype from which future fully automated intelligent vehicle highway systems can be developed. Caltrans is a core member of The National Automated Highway System Consortium (NAHSC), which was formed to specify, develop, and demonstrate a prototype of a working AHVS in the United States by 2001. AHVS technology will consist of at least two major subsystems, including vehicles and infrastructure. AHVS will showcase features such as adaptive cruise control, object detection, collision warning and avoidance systems, longitudinal and lateral vehicle control, maneuver coordination and navigation systems. The specifications will provide for evolutionary deployment that can be tailored to meet regional and local transportation needs. The consortium will seek opportunities for early introduction of vehicle and highway automation technologies to achieve early benefits for all surface transportation users. An AHS Proof-of-Technical Feasibility Demonstration occurred during August 1997 on the existing I-15 HOV lanes.

LONG LIFE PAVEMENT REQUIREMENTS

Under the 10-Year State Highway Operation and Protection Program (SHOPP) Rehabilitation Plan mandated by Senate Bill 45, long life pavement rehabilitation work will be performed on a State highway if the facility meets the following criteria:

- Average Daily Traffic \geq 150,000 or high percentage of truck traffic ($>10\%$);
- Urbanized areas;
- Intermodal Corridors of Economic Significance; or
- Interchanges with designated truck lanes.

The plan is to develop a viable rehabilitation strategy that will extend the life of the roadway. The goal for lane reconstruction is a 40-year design period, with the expectation of fewer lane closures for repairs. Maintenance and construction worker safety would improve by minimizing their exposure to traffic. Long life pavement work will result in comfort improvements and increased timesavings for motorists.

At the present time SR-52 has PCC pavement throughout the route. The long-life rehabilitation strategy will be considered in the future.

COMPARISON OF CONCEPTS

In 1992, the original concepts were set based on the SANDAG Series 7 Population and Travel Forecasts for the year 2010. The 2002 Transportation Concepts are based on the SANDAG Series 9 Population and Travel Forecasts for the year 2020. Table 12 is comprised of a segment by segment comparison between the 1992 Transportation Concept Report and the 2001 Transportation Concept Report.

TABLE 12			
COMPARISON OF CONCEPTS			
1992 Transportation Concept for 2010 (Series 7 2010 Forecast)		2002 Transportation Concept for 2020 (Series 9 2020 Forecast)	
Location	# Lanes/ Facility Type	Location	# Lanes/ Facility Type
I-5 to I-805	6F	I-5 to I-805	6F
I-805 to SR-163	6F + 2HOV	I-805 to SR-163	6F + 2HOV
SR-163 to I-15	6F + 2HOV	SR-163 to I-15	6F + 2HOV
I-15 to Mission Gorge Road	6F + 2HOV	I-15 to Mast Blvd	6F + 2HOV
Mission Gorge Road to SR-125	6F + 2HOV	Mast Blvd to SR-125	6F + 2HOV
SR-125 to Cuyamaca St.	6F	SR-125 to Cuyamaca	6F
Cuyamaca St. to SR-67	6F	Cuyamaca to SR-67	6F

6F = (6) Lane Freeway

HOV = High Occupancy Vehicle Lane(s)

2020 TRANSPORTATION CONCEPT FACILITY IMPROVEMENTS

Table 13 shows mainlane facility improvements to SR-52 that are a part of the 2020 Transportation Concept. The peak hour V/C ratio and peak hour Operating LOS listed assume completion of the proposed facility improvements.

TABLE 13				
2020 TRANSPORTATION CONCEPT FACILITY IMPROVEMENTS				
Segment/ County/ Post Mile	Location	Improvement Description	Peak Hour Operating LOS*	Concept LOS**
1) SD 0.3-3.8	I-5 to I-805	Upgrade 4F to 6F	D	E
2) SD 3.8-6.6	I-805 to SR-163	Add 2HOV	C	E
3) SD 6.6-7.3	SR-163 to I-15	Add 2HOV	C	E
4) SD 7.3-13.3	I-15 to Mast Blvd	Upgrade 4F to 6F + 2HOV	C	E
5) SD 13.3-14.8	Mast Blvd to SR-125	Upgrade 4F to 6F + 2HOV	B	E
6) SD 14.8-16.4	SR-125 to Cuyamaca	Construct initial 4F, then 6F	E	E
7) SD 16.4-17.8	Cuyamaca to SR-67	Construct initial 4F, then 6F	D	E

HOV = High Occupancy Vehicle lane(s) LOS = Level of Service 4F, 6F = (4, 6) Lane Freeway

Additional improvements such as transit, non-motorized facilities, park and ride lots, transportation demand management strategies, transportation system management strategies, and additional lanes should also be developed either as part of the 2020 Transportation Concept where appropriate or the Post-2020 Ultimate Transportation Corridor.

POST 2020 ULTIMATE TRANSPORTATION CORRIDOR

The post-2020 Ultimate Transportation Corridor (UTC) describes the long-term (beyond the 20-year planning period) right of way requirements for a particular segment. The long-term needs are determined by investigation and analysis of Community Plans, General Plans, Transportation Plans, Land Use Plans, Environmental Documents, and other planning documents. The intent is to take advantage of or develop opportunities for long term right of way acquisition and to work with local and regional agencies to implement corridor preservation measures.

The UTC proposes the number of lanes and facility type for SR-52. The UTC is the same as the 2020 Transportation Concept for all segments except Segments 1, 6, and 7. For these segments, the UTC is study two HOV lanes. Additional improvements should be considered to address projected deficient levels of service. Because transportation planning and land use assumptions are dynamic processes, the UTC is subject to change.

LIST OF SYSTEM PLANNING ACRONYMS

ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
APCD	Air Pollution Control District
CHP	California Highway Patrol
CMP	Congestion Management Program
CTC	California Transportation Commission
DSMP	District System Management Plan
DU	Dwelling Unit
EA	Environmental Assessment
EPA	Environmental Protection Agency
F&E	Freeway and Expressway System
FHWA	Federal Highway Administration
HOV	High Occupancy Vehicle
IBTC	International Border Trade Corridor
ICES	Intermodal Corridors of Economic Significance
ISTEA	Intermodal Surface Transportation Efficiency Act
ITIP	Interregional Transportation Improvement Program
ITS	Intelligent Transportation Systems
LOS	Level of Service
LRT	Light Rail Transit
MSL	Maintenance Service Level
MTDB	Metropolitan Transit Development Board
NAAQS	National Ambient Air Quality Standards
NHS	National Highway System
PM	Post Mile
PR	Project Report
RAQS	Regional Air Quality Strategy
RAS	Regional Arterial System
RTIP	Regional Transportation Improvement Program
RTP	Regional Transportation Plan
SANDAG	San Diego Association of Governments
SHOPP	State Highway Operation and Protection Plan
STAA	Surface Transportation Assistance Act
STIP	State Transportation Improvement Program
TASAS	Traffic Accident Surveillance and Analysis System
TCR	Transportation Concept Report
TSDP	Transportation System Development Plan
TMC	Transportation Management Center
UTC	Ultimate Transportation Corridor
V/C	Volume to Capacity
VMT	Vehicles Miles Traveled
Smart Corridor	(Author's Definition) Employs technology to improve the operating efficiency of all the roadways within a corridor in order to reduce congestion.

LEVEL OF SERVICE (LOS) DEFINITIONS

The concept of LOS (LOS) is defined as a qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers. A LOS definition generally describes these conditions in terms of such factors as speed, travel time, freedom to maneuver, comfort and convenience, and safety. Levels of Service definitions can generally be categorized as follows:

<u>LOS</u>	<u>V/C</u>	<u>Congestion/Delay</u>	<u>Traffic Description</u>
<i>(Used for two and four lane freeways and expressways)</i>			
"A"	<.34	None	Free flow.
"B"	0.35-0.52	None	Free to stable flow, light to moderate volumes.
"C"	0.53-0.69	None to minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted.
"D"	0.70-0.92	Minimal to substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver.
"E"	0.93-1.00	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor.
<i>(Used for six lane freeways and expressways)</i>			
"A"	< .39	None	Free flow
"B"	0.40-0.59	None	Free to stable flow, light to moderate volumes
"C"	0.60-0.74	None to Minimal	Stable flow, moderate volumes freedom to maneuver noticeably restricted
"D"	0.75-0.92	Minimal to Substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver
"E"	0.93-1.00	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor
<i>(Used for freeways and expressways)</i>			

"F0"	1.01-1.25	Considerable 0-1 hour delay	Forced flow, heavy congestion, long queues form behind breakdown points, stop and go.
"F1"	1.26-1.35	Severe 1-2 hour delay	Very heavy congestion very long queues.
"F2"	1.36-1.46	Very severe 2-3 hour delay	Extremely heavy congestion, longer queues, more numerous breakdown points, longer stop periods.
"F3"	>1.46	Extremely severe 3+ hours of delay	Gridlock

SR-52 TRANSPORTATION CONCEPT FACILITY IMPROVEMENTS



Segment / Location

Improvement Description

Peak Hour Operating LOS

Concept LOS

① I-5 to I-805	Upgrade 4F to 6F	D	E
② I-805 to SR-163	Add 2HOV	C	E
③ SR-163 to I-15	Add 2HOV	C	E
④ I-15 to Mast Blvd	Upgrade 4F to 6F + 2HOV	C	E
⑤ Mast Blvd to SR-125	Upgrade 4F to 6F + 2HOV	B	E
⑥ SR-125 to Cuyamaca	Construct initial 4F, then 6F	E	E
⑦ Cuyamaca to SR-67	Construct initial 4F, then 6F	D	E

HOV = High Occupancy Vehicle lane(s)

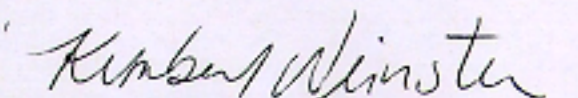
LOS = Level of Service

4F, 6F = Four or Six Lane Freeway

State Route 52

I approve this Transportation Concept Report as the guide for development of State Route 52 over the next 20 years.

Submitted By:

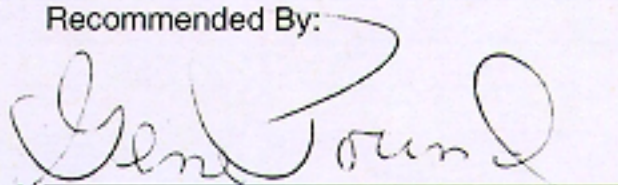


Kimberly Weinstein, Chief
System Planning Branch

3-18-02

Date

Recommended By:

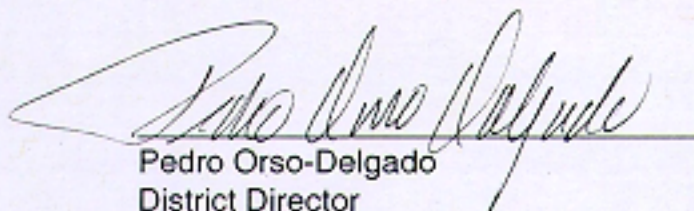


Gene Pound
Deputy District Director
Planning

5-23-02

Date

Approved By:



Pedro Orso-Delgado
District Director

5/30/02

Date